The Cost of Empowerment:
Multiple Sources of Women's Debt in Rural India

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Abstract
Poor women borrow from multiple sources. This study examines whether the source of debt matters for women's role in household financial decisions. Drawing on a household survey from rural Tamil Nadu, we categorise women's loans along the lines of accessibility and formality into 'planned loans' and 'instant loans'. We find that 'instant loans' support women's bargaining power in various types of household financial decisions, whereas 'planned loans' have no impact. This surprising result is better understood when the nature of 'instant loans' is examined – these are frequently usurious, involve coercive enforcement methods and considered socially debasing. Hence women who use them perform a convenient role for their households and in return gain some negotiating power.

Keywords: Debt, Women Empowerment, Microfinance, Tamil Nadu, India.
JEL codes: G24, L26, O16, M13

1. Introduction

Considerable progress has been made in the last two decades toward a better understanding of poor people's financial lives (Collins *et al.*, 2009). Of special interest to researchers has been the borrowing behaviour of poor women. It is now well documented that poor women can have complex borrowing networks; where they simultaneously borrow from different sources, in different forms and with vastly different repayment arrangements. They may combine support from their relatives and friends with short term borrowing from neighbours and shopkeepers, while at the same time borrow from moneylenders and formal institutions (Kabeer, 1994; Johnson 2004; Salway *et al.* 2005;

Guérin 2011). Despite this detailed documentation of multiple sources of borrowing by poor women, when considering the impact of credit on women empowerment, research so far has only focussed on microfinance. Other formal and informal sources of borrowing as a possible determinant of women's empowerment have been entirely ignored. Drawing on a household survey from the Indian state of Tamil Nadu, we seek to remedy this by investigating the role of multiple sources of women's debt on their empowerment.

Part of the reason why women may borrow from diverse sources is because of the way financial responsibilities are divided within the household. Irrespectively of the diversity and complexity of financial arrangements, intra-household financial responsibilities are generally divided along the gender lines (Dwyer and Bruce, 1988; Kabeer, 1994). Men and women also operate their own financial circuits and borrow from different sources for different purposes (Johnson, 2004; Guérin, 2011; Agier *et al.* 2013). Men are typically in charge of asset management while women take care of expenditures in household provisioning, children's health and education (Thomas, 1990; Senauer, 1990; Schultz, 2001; Duflo, 2003; Chant, 2007; Garikipati, 2009). In poor households, women typically lack co-ownership of productive assets but are nevertheless responsible for family provisioning (Kabeer, 1994; da Corta and Venkateswarlu, 2005), which often means they have to secure small loans to balance the family budget (Dwyer and Bruce, 1988).

Women in developing countries engage in permanent juggling between various sources of income, savings, loans or reciprocal gifts (Dwyer and Bruce, 1988; Ardener and Burman, 1996; Lemire, 2001; Johnson, 2004) and India is no exception (Mencher, 1988; Harris-White and Colatei, 2004; Guérin, 2011). Notwithstanding amounts and costs, borrowing sources differ in many important aspects, notably in terms of accessibility and flexibility (Collins *et al.*, 2009). Significantly, borrowing sources can also differ along social lines (Shipton, 2007; Morvant-Roux *et al.*, 2014); where borrowing from sources like banks, financial institutions or the local elite can be honourable, while borrowing from other sources like local moneylenders and shopkeepers is degrading (Guérin *et al.,* 2013). Borrowing from degrading sources is also less acceptable to men than to women – who borrow for different reasons anyway (Harris-White and Colatei, 2004; D'Espallier *et al.*, 2011).

Evidence suggests that even women's microloans, meant for the promotion of self-employment, are routinely diverted into consumption (Kalpana, 2008; Garikipati, 2008a; D'Espallier *et al.*, 2011; Guérin *et al.*, 2012). In fact, Collins *et al.* (2009) argue that credit for consumption is a necessity in cash-strapped families. Such credit may also reduce women's reproductive work burden by allowing her to make time saving choices and release more time for productive work (Johnson, 2004). It is for these reasons that in poor households, informal credit networks are more important to women than to men. To some extent, the emergence of Rotating Savings and Credit Associations may be interpreted as a response to this 'female burden' imposed by male hegemony over family assets and incomes on the one hand, and by a disproportionate burden for family provisioning on the other (Bouman, 1977, 1994; Ardener and Burman, 1996; Johnson, 2004). In such context, it is not surprising that access to multiple sources of credit is important for women.

The link between women's borrowing and their empowerment is heavily debated (Pitt and Khandker, 1996; Hashemi *et al.* 1996; Kabeer, 2001, 2005; Holvoet, 2005; Garikipati, 2008a; Armendáriz and Morduch, 2010; Banerjee *et al.* 2010; Agier and Szafarz, 2013; D'Espallier, *et al.*, 2011, 2013). This literature, however, focuses only on the impact of microfinance on women empowerment. As far as we know, there are no studies that address the issue of whether credit in general, including credit from informal networks, matters for women's empowerment.

We aim to address this gap by exploring a unique dataset from rural Tamil Nadu that is the result of extensive fieldwork over the five-year period, 2005-2009. The main data comes from a household survey in 2008, supplemented by qualitative interviews in 2009. The earlier years were spent in detailed profiling of the survey region and household credit behaviour. We pay attention to all available sources of credit and to all types of financial decisions through which women empowerment possibly takes place. Following careful scrutiny, we categorise women's borrowing into 'planned loans' and 'instant loans'. Planned loans are taken from formal, institutional sources and local elites and are repaid over several months or even years. Large loans taken from friends or relatives may also fall into this category. In all cases of planned loans, we find that there is a formal, generally written, agreement in place. In contrast, instant loans are typically taken from informal sources, for short periods, are small in size and are available immediately with little or no paperwork. These loans are characterised by accessibility and informality and sourced from neighbours, friends, relatives, pawnbrokers, ambulant lenders and shopkeepers. Interestingly, we find that while planned loans are taken by both men and women, instant loans are typically secured only by women.

With respect to financial decision making, and as expected in a patriarchal society, we find that while women are often responsible for everyday spending, they are less likely to have the sole control over decisions taken less frequently and of strategic interest to the household. Following this observation, we rank decisions in order of their importance to the household using objective indicators of frequency and size. We separately examine the impact of women's borrowing on each decision type. Our findings show that women's borrowing does have a beneficial impact on their intra-household financial bargaining power – at least as much as their cash incomes. As expected, we find the impact to be significant for routine decisions, but we also find significant impact for decisions of strategic interest to the household like in matters of health and education. A disaggregated analysis reveals that this impact is driven solely by loans categorised as instant loans and planned loans (including microfinance) do not help women have a greater say in household financial decisions.

This surprising result is better understood when we closely examine the nature of instant loans. We interview women borrowers and their household members to help unpick some of the possible reasons for this unexpected result. These interviews provide useful insights into the social hierarchy of debt that exists in rural India, where not all sources of loans are valued equally. Borrowing from formal sources like banks and the local elite is considered socially respectable, as such borrowing is usually for investment or asset expansion or for prestigious ceremonies.[1] On the other hand, instant loans from informal sources for short periods of time are considered socially degrading as these are usually taken for immediate consumption. Women take these loans to sustain household's reproductive activities and to cover for family honour. In several cases we find that instant loans are exploitative and lenders, especially ambulant lenders, use coercive practices to elicit compliance. Women, who use instant loans to provide for their families, thus perform a convenient service for their husbands and other household members who do not themselves borrow from these sources. The additional bargaining power that these women gain in their households can then be seen as a concession by their families for securing instant loans. Women sacrifice their social honour and physical safety to enable the smooth day-to-day running of their households and in return they are given additional bargaining powers in their household. If institutional credit aims to benefit women, lenders must rise to the challenge of providing loans that emulate the flexible characteristics of instant loans without the associated usurious and coercive conditions.[2]

2. Data

During the years 2005 to 2009, fieldwork was carried out in rural Tamil Nadu in South India. The survey focused on women belonging to Self-Help-Groups (SHGs). These groups typically gather twelve to twenty women who firstly circulate money among each other and later become eligible for external loans. They are supported by institutional credit that is insured by the National Apex Bank for Agriculture and Rural Development (NABARD, India). SHGs are the most common modality of institutional lending in rural Tamil Nadu. In March 2009, of the 12 million clients served by microfinance institutions in rural Tamil Nadu, SHGs accounted for 62.2% of the number of borrowers and 62.9% of the volume of outstanding credit (Sa-Dhan, 2009).

Data collection was done in three distinct stages in the villages of the districts of Vellore and Thiruvallur. First, during 2005 and 2006, semi-structured interviews with men and women were carried out and group discussions were organised with key informants including lenders. These were used to capture the nature of household budget management systems and other financial arrangements within the households. Specific attention was paid to gendered roles and responsibilities in terms of management, borrowing, saving, repayment and financial decisions. This qualitative stage exhibited the diversity of borrowing practices and their complex modalities. In the second stage, a quantitative questionnaire was developed and implemented in 2008. We used a stratified sampling strategy to select the sample for this phase of the fieldwork. Details are provided in the Appendix. We interviewed 163 married women who were members of SHGs and had completed at least one loan cycle with the program.[3] The survey focused on household's socio-economic characteristics, financial decision making and financial practices. Finally, in 2009, qualitative fieldwork further explored the role of debt in women's bargaining power within their households. Repeated visits with 15 women from different socio-economic backgrounds were carried out with the aim to situate the role of women's instant borrowing within the dynamics of intra-household power relationships.

Table 1 gives an overview of the socio-economic characteristics of the respondents, their households and finances. The average age of our respondents is around 35 years and 33% of the women in our sample are illiterate. This is despite the fact that education has improved over the recent decades in Tamil Nadu, especially for women (Vijayabaskar *et al.*, 2004). A little over 31% still live in traditional agnatic joint family units and the average size of a household is 4.8 members, including 1.7 children. Approximately 60% of the households are Dalits.[4] Around 75% of the households are located around 10-30 minute bus ride from urban centres, while the rest are much more remote.

On average, the household's annual cash income is around 38,000 INR (850 USD) and around 12.6% of this income is earned by women.[5] Half of the women respondents, however, have no regular income generating activity. Meagre household cash incomes[6] are supplemented by significant (net) kinship support of around 16,000 INR on average per year (just over 40% of household's cash incomes).[7] Almost equal support is received from the kin of the husband and wife. In addition, households incur significant levels of debt either to support consumption smoothing or income generation activities. Loans contracted during the year 2008 were in excess of 75,000 INR on average per household, which is around twice the annual household incomes. More than one third of this is classed as women's borrowings.

From our data it is evident that women's role in household's finances go well beyond earning a cash income only. While their contribution to household incomes is just around 12%, they are responsible for around 50% of support received from relatives and for over 35% of the loans that the household incurs. It would be fair to say that whether they are earning cash incomes or not, women in our sample are highly involved in family finances and a large proportion of that involvement is sustained via borrowing. In the next section, we learn more about women's borrowing practices.

<Table 1 Here>

3. Women's Borrowing Habits and the Social Hierarchy of Debt

In the survey area, poor women tended to have complex borrowing habits – borrowing simultaneously from several sources and for varied reasons. From numerous deliberations with our respondents, we concluded that the main differences between the sources of borrowing were the speed of accessibility and the formality of a contract. We hence decided to categorise women's loans along these lines. A fair amount of data mining preceded the categorisation of loan types into 'planned' and 'instant'.[8] A loan was categorised as 'planned' if it was taken in a planned manner and there existed an explicit agreement between the contracting parties and as 'instant' if it was accessed immediately, with little or no paperwork. The average debt incurred by women in 2008 was 28,555 INR. Of this, 19,838 INR (69.5%) was planned and the remainder 8,717 INR (30.5%) was of the instant type. Both categories are made up of loans from various sources. Table 2 provides a quick overview of the terms and conditions attached to each of the loan sources.

'Planned loans' are usually sizeable amounts of money, incurred for long periods and often for investment purposes; mainly agricultural business investment, but also social investments like marriage and education. The essential elements of these loans are their planned nature and the presence of a contract – usually a written one. The most common form of planned loans is provided by the local elites who are seeking to invest their surplus incomes. Although a contractual arrangement is in place and collateral may be required, trust is the main condition in such contracts (also observed by Harriss-White and Colatei, 2004; Swaminathan, 1991). The other planned loan types include formal sources like banks and private financial companies. Large amounts borrowed from neighbours, friends and relatives may also sometimes require a more formal agreement between the parties. It was typically for men to incur planned loans, but women are increasingly involved in terms of sharing the repayment burden and also being the named person in contracts.

'Instant loans' are sourced informally; the amount of money involved is usually small and for a shorter period of time (generally days or weeks). Instant loans are mainly intended for immediate consumption. Accessibility is primarily valued but there is also less formality around these loans – little paperwork and virtually no formal contract. In practice, instant loans gather several specific sources of loans: *kaimathu, thandal*, loans from pawnbroker, shopkeepers, friends and family. *Kaimathu* literally means "exchange money from hand to hand". It refers to very small loans from neighbours, with zero interest and implicit reciprocity. *Thandal* means "immediate" and represents small to medium loans from mobile lenders who bring cash and collect repayments at the door step. *Thandal* is typically a few thousand rupees given for around 3 months. Interest charged is quite high – in the range of 10 to 15% per month. Pawnbroker loans are another frequently used option. Almost any asset can be pledged, but gold in the form of jewellery is the most common. The loan amount depends on the item pledged. Pawnbroker loans are normally of one year duration and interest rates charged are around 2 to 3% per month. Village corner shops and grocery stores in nearby towns also offer rapid credit with easy terms. Typically, households are able to buy groceries and pay later without additional charges. Shopkeepers would generally offer such credit because they are familiar with the woman and her household and are confident about repayment. What matters in such cases is not the individual woman, but the overall creditworthiness of the family.

Importantly, women in our survey categorised SHG loans as a planned loan. In practice, SHGs are micro-banks composed of fifteen to twenty people (only women in our study) who manage two types of loans: internal loans based on members' savings and external loans provided by banks. Price is the main advantage of SHG loans: with a monthly interest rate of 1.5 to 2%. However the length of the procedure and its rigidity are major weaknesses. For internal loans, SHG members have to wait for the monthly meeting and potential borrowers never know in advance whether their demand will be accepted. For external loans, procedures are not only protracted but also unreliable as SHGs grant individual loans based on fund availability, but also on the group's evaluation of the requests.

Another significant observation of our fieldwork is that women play an important role in instant loans. This is especially true when it comes to reciprocal exchanges with neighbours, transactions with shopkeepers in the village and ambulant lenders at their doorstep. At least partly, this is because the main purpose of instant loans is to cope with income smoothing, and small emergencies which is typically a female responsibility. Men do not want to bother with the 'domestic task' of household management. Day-to-day management of the household is clearly seen as a 'women's little problems' and women are simply expected to get on with these. In the words of one of our male focus group participants "…*women are best at sorting out these little annoyances*" (Murali, age 43).

Men also avoid getting involved in such loans because it is a matter of honour and status.[9] It would be considered degrading for a man to ask neighbours and shopkeepers for a few hundred rupees to smooth out matters of daily survival. Borrowing large sums is a source of pride and reputation – an indicator of social prestige. In contrast borrowing small amounts is degrading, especially when it takes place in the neighbourhood – it suggests a lack of ability to run one's household. Explaining how degrading borrowing small amounts would be for her husband Parvati (age 35) explains: *"…men do not want to be disturbed by small expenses. He has a good position, he cannot beg like this. People will say: 'what sort of earning he has', 'what sort of man he is'. Even if he wanted to go, I won't let him, it is also a matter of status for me".* Parvati herself borrows from multiple informal lenders, suggesting that it is more acceptable for wives to take such loans, but husbands' doing the same is closely associated with loss of family honour.

The profile of instant loan lenders also contributes to the observed social hierarchy among sources of debt. Borrowing from ambulant lenders, in particular, is seen as the most degrading practice, reserved only for women and Dalits (also see Harriss-White and Colatei 2004; Guérin *et al.* 2013). Though ambulant lenders are often the only way to address emergencies, they are the last resort, because they are expensive, but also because of the lack of respect shown by these lenders. They come to the household's doorsteps, precluding any form of discretion. They do not request any collateral but use coercive enforcement methods. The ambulant lenders we interviewed themselves state that women are more prepared to tolerate abusive language from them and are more responsive to such treatment. It is also the reason why they prefer dealing with women. In some cases ambulant lenders behaved so badly that households had barred the women from using them. One of our respondents, Sandhya (age 27), told us about how her husband accused her of exposing herself to bad men "…*from what kind of men you borrow*?" She was explicitly stopped from borrowing for a while and now she goes for so-called *"safe lending"* – only from lenders known to the family.

Evidence also suggests that women are excluded from certain types of institutional loans. Such exclusions apply at several levels – not only gender, but class and caste also matter (Harriss-White and Colatei 2004; Swaminathan 1991; Guérin *et al.* 2013). One of our respondents, Saraswathi (age 43), is a Dalit who relates her experience of giving up on a bank loan for 30,000 rupees after having tried for nearly two months. She describes the slowness, complexity but also unfairness of the procedure. *"If you want 10 paisa from the bank, you'll lose 10 inches of your legs"*, she says, referring to the multiple trips she made to the bank. She went over a dozen times and each time the paperwork was not acceptable and she was asked for new certificates (certificate of residence, guarantor certificate and so on). There were also institutional barriers that are perhaps embedded in gender – she knew she had to bribe the clerk and the cashier but did not know how to approach them. She relates the contrasting experience of a man from her village (from a different caste) who told her about this loan scheme: "*He got it within 10 days, without any certificate. Why do you think he got it in 10 days, without giving any certificate, while I have to go round and round?"* she questions.

We thus witness a distinct 'social hierarchy of debt' – where loans get associated with a social status depending on their source, size and purpose. Instant loans from informal sources, for small amounts of money and for immediate consumptions are assigned a lowly status in this social order. Furthermore, we witness a 'feminisation' of such debt – where women negotiate their families out of routine expenditures and have to withstand the insults and sullies that are part of such borrowing.

That said, the importance of instant loans for women cannot be understated. Instant loans constitute over 30% of women's borrowings and given that they are borrowed for different reasons than planned loans – they may impact women in different ways. Given that instant loans are mainly taken for consumption needs – it is reasonable to hypothesise that instant loans help women have a role in routine consumption decisions but may not help her have a say household's strategic investment decisions. This may be better done by planned loans. For these reasons, examining the differential impact of planned and instant loans on women's role in financial decisions is significant.

<Table 2 Here>

4. A Measure of Women Empowerment

There is significant debate around the measurement of women empowerment (for an overview see Malhotra *et al*. 2002). Whilst recognising its multidimensional quality, we focus on just one aspect of women empowerment, namely: women's role in financial decision-making. Two reasons justify this choice. First, for the sake of result comparability; we favour this indicator as it is widely used in the literature (Kabeer 2001; Hashemi *et al.* 2005; Holvoet, 2005; Garikipati, 2008a). Second, the respondents themselves validated this choice by acknowledging that participation in financial decision-making is a sign of respect and recognition by their family.

From our fieldwork it was also apparent that not all financial decisions were valued equally. Some reflect social norms and pre-existing gender division of roles and responsibilities. For instance, the purchase of daily items (food) were typical female responsibility, while strategic life choices (children education's and social ceremonies) fell within the male and in-laws' traditional arenas of decision-making (also see Kabeer, 2001). Using first-stage qualitative analysis, we identify four types of financial decisions that households make. We used focus group discussions to rank these decisions from routine, day-to-day ones to those considered more strategic to the household and hence more prestigious. We arrive at the following ranking (ordered from the most routine to the most strategic): routine, health, children's education, and social ceremonies. Some typical examples of household financial decisions within each category from the fieldwork are presented in Table 3. We used the two benchmarks of 'regularity' and 'predictability' in classifying specific decisions. If a decision was taken regularly (daily or weekly) and was expected by the household – then it was considered 'routine'. If a decision was taken only occasionally (irregularly, biannually or annually) and/or was unexpected and could not be prepared for in advance then it was classed as non-routine and was classified under another relevant category. In addition, any expense that was in excess of 300 rupees was also classed as non-routine. We arrived at this cut-off after discussions with several focus group participants. Excluding emergencies, expenses in excess of 300 were typically of strategic interest to the household – one that involved a fair level of planning. Participating in such decisions was considered quite important within the household.

Respondent were asked to describe own involvement in each type of decision. Answers were coded into one of the three options: (0) has little or no role in the decision which is made entirely by other member(s) of the household; (1) decides jointly with other member(s) of the household; (2) makes the decisions alone. Figure 1 summarizes the responses of the 163 married women respondents. It shows that women in our survey are actively involved in household's financial decisions. Depending on the issue at stake, they are seen to decide, alone or jointly, in 65% to 75% of the cases – which is a notable outcome – many are also seen to make decisions alone (25% to 55%). For routine decisions, we find that if the woman respondent report as having no role, it is generally another (older) woman in the household who has responsibility for it.[10] However, the more strategic the decision, the less likely that women would be consulted or be the sole decision maker. For instance, in around 35% of the cases women have no say in health and educational expenses and in around 25% of the cases they are not consulted about social ceremonies. The household member(s) who make decisions in such cases is typically the husband, but also the parents-in-law. In the case of decisions around ceremonies, it is notable that in just a little over 50% of the cases women are involved in the decision. Because of the nature of social ceremonies (see Table 3), these decisions are typically drawn-out, involving much discussion and planning within the family. In this process, it is unsurprising that women have a role, similar to other members of the family.

The different consideration given to routine versus non-routine financial decisions was a theme that kept recurring in our focus group interviews. One of our focus group participants Rajeswari (age 54) lives with her son's family. When asked whether her daughter-in-law, who looks after the day-to-day affairs of the household, is involved in big financial decisions – her response is extremely clear: *"How do you want her to decide these things? She has no idea, she is not capable..."*

It was evident that women recognised the difference in the importance attached to routine versus strategic decisions and felt considerable pride when they participated in financial decisions that are of strategic interest to the household. Parvati (age 42) is one such respondent, she has no regular income but she manages household budget and participates in all major financial decisions. She also explains that she struggled a lot with her husband to educate her handicapped daughter: *"I told him I am the pillar of the family, you earn money but my hands are safer, (and) at the end he got convinced."*

Furthermore, it was evident that women who make non-routine financial decisions for their households on their own wield a considerable level of control and authority within their households. Rajam (age 48) who has the sole responsibility for all major decisions in her household tells us: *"I am the back bone of the family and if I stop functioning then the family will suffer. They know this. All of sudden if I close my eyes then the whole family is in dark"*. Describing the way she takes decisions – she tells us that she decides and lets the family know about it. She is confident of their consent. Interestingly, Rajam does not bother with most of the routine tasks in the household – which are managed by her daughter-in-law.

From this survey experience, we draw two significant conclusions. First, there is a clear differentiation in the importance attached to various types of financial decisions within the households. Women with a role in non-routine financial decisions are seen to enjoy a better status within their households when compared to those with no role in such decisions. It would therefore be inappropriate to merge all decisions in one single measure or to assume an underlying relationship between them. Instead, we separately consider women's role in each type of decision and the various factors that help or hinder her role in making that decision. Second, women with the authority to make decisions on their own are clearly different from those who decide jointly with others in their household. It would be interesting to capture the differences in the experiences of women who wield different levels of power in their households. We attempt to do this by assigning an order to women's role in decision making. Women who take decisions on their own are ranked highest in this order, followed by women who decide jointly with others in the household and finally women with no role.

<Table 3 Here>

<Figure 1 Here>

5. Does the Type of Credit Matter for Women's Empowerment?

In this section, we examine the determinants of women's empowerment as measured by their role in household financial decisions. We test two main hypotheses. First, that woman's borrowing matters, along with other sources of cash, household and personal characteristics. Our second hypothesis is that all sources of borrowing do not matter equally, more specifically we expect to see planned loans and instant loans influence decision making in different ways.

Before we proceed to analyse our field data however, it is important to consider if it suffers from sample selection bias. Typically, selection problem occurs because the inherent differences between women who select to access credit and those who don't are also likely to influence the empowerment variable. If these differences are ignored, it may lead to statistical results that are exaggerated or even misleading. In this study, the selection problem we need to consider is slightly different. As we are interested in comparing the differential impact of planned loans and instant loans on women empowerment, the inherent differences between women accessing these types of loans has implications for our analysis. Women who access planned loans may be more outgoing, more entrepreneurial and have better negotiating skills when compared to those who rely on small instant loans. These differences may have implications for empowerment – which is of interest to us. The problem of course is that these inherent differences cannot be observed directly. We can however deduce potential selection issues by comparing the two groups of women along the variables that can be observed; as these differences can give us an insight into differences in inherent nature. However, given the nature of our data, a straightforward comparison between women who access planned loans and those who access instant loans is not possible. All the women in our sample are SHG clients who have completed at least one loan cycle. SHG loans constitute the biggest share of all planned loans. And nearly all women also take instant loans of one type or the other. Given these data limitations, the only meaningful comparison we can make is between women who rely more on planned loans and women who rely more on instant loans. We carry out an independent samples *t*-test to compare personal and household characteristics of women who borrow more from planned sources (97) and women who borrow more from instant sources (49). For this part of the analysis we exclude 17 women who borrow equal or very similar amounts of planned and instant loans.

Table 4 reports the *p*-value associated with the *t*-test. The *p*-value indicates the probability of seeing the difference we find in the two samples if there is really no difference in the population. Generally, if the *p*-value is below 0.05 (5%), we can conclude that the observed difference is not down to chance and that there is a statistically significant difference between the two population means. Using the sample median as a cut-off point, we fist compare women whose total borrowing (planned + instant) is below or equal to the median borrowing and women whose total borrow is above the median. These comparisons suggest that there are some differences between these two groups of women: women who borrow above the median are older, live in less remote areas and their household's enjoy greater support from husband's kin. Comparing women who rely more on planned loans and those who rely more on instant loans also reveals some differences between these groups, but these differences are mainly in household characteristics. Specifically, women who rely more on planned loans tend to have larger families, suggesting greater need for credit. They are also more likely to belong to non-Dalit households with significantly better access to resources like land and income. This suggests that despite the achievements in the area of inclusive credit, structural barriers like caste and class continue to hinder access to institutional credit in rural India. This also matches with the qualitative evidence from our fieldwork (see Section 3). Women who rely on instant loans, on the other hand are likely to belong to Dalit households that are significantly poorer but enjoy greater external ties and live in less remote areas. These differences fit in with our field observations that instant loans are more likely to be accessed by poorer households. Poor households in more accessible areas are also likely to be the target of marketing strategies adopted by ambulant lenders. The ability to borrow instantly also relies on how well the household is known to people in the community as trust and reciprocity, rather than physical assets, are the main collaterals in such loans. Lenders are prepared to lend to women because they know the family well and are not only guaranteed repayment but also the family's goodwill and continued patronage. Swaminathan (1991), and Harriss-White and Colatei (2004) make similar observations for elsewhere in rural India where credit to individuals is based on familial reputation and long term goodwill.

These comparisons suggest that while there are some differences between women who rely more on planned loans when compared to those who rely on instant loans – these differences are by and large at the household level.[11] In particular, we find that women from poor, but well connected Dalit households are more likely to access instant loans. Despite there being no systematic evidence to suggest a serious selection problem, when interpreting our results, we will need to be mindful of these differences between the two groups of women.

Following these comparisons, we regress women's role in financial decisions on borrowing and other explanatory variables related to individual characteristics.[12] Given our earlier observation that routine and non-routine decisions are inherently different, we consider a woman's role in each decision type separately.[13] Using the earlier classification of decision types we estimate four models: Routine; Health; Education and Ceremonies. In addition to women's borrowing, we include three categories of explanatory variables: woman's personal characteristics; household characteristics and variables on household finances. For descriptive statistics see Table 1 and Table 4.

With respect to woman's personal characteristics, we expect age, education and number of children to have a positive coefficient. Age is associated with experience and this may render older women with greater agency in household decisions. Education is associated with better decision making ability as these may involve basic literacy and numeracy skills; hence educated women can be expected to have a greater role in decisions. Further, women who have been through the enduring experiences of child bearing and rearing may also be given a greater role in household decisions, especially if these decisions affect their children. With respect to household characteristics, we consider the size of the household, whether or not it is a Dalit household, whether it is a joint or a nuclear family set up, the external ties enjoyed by the household, the material used to construct the house and whether it is remotely rural. We have no *a priori* expectations on the relationship these variables are likely to have with woman's decision making power.

Finally, with respect to household's finances, we expect other's income, support received from husband's kin and husband's borrowing to have a negative coefficient. These variables relate to the level of financial contribution others make to the household and the expectation is that the more other members contribute, the less say woman will have in household decisions. Conversely, we expect woman's income, support from her kin and her borrowing to have a positive coefficient because these variables relate to the extent of contribution she makes to the household economy.

Following the discussion in Section 4, we assign an order to our dependent variable: woman's role in financial decision.[14] Within each decision type, we consider women who take the decision on their own as the most empowered, followed by women who take the decision in consultation with others and finally women who have no role in the decision and hence the least empowered. Given that our dependent variable is ordered – the appropriate theoretical model is the ordered probit model (Greene, 2000). Heuristically speaking, the ordered probit technique is a generalisation of the linear model to cases where the dependent variable is discrete and takes only a finite number of values possessing a natural ordering (Hausmann *et al.*, 1991). An advantage of ordered probit is that unlike linear regression, it allows for unequal shifts between ordinal categories in the dependent variable. Thus, for example, it does not assume that the difference between the likelihood of having no role in the decision and having a joint role has the same magnitude as the difference between the likelihood of having a joint role and an independent role, given a unit change in the explanatory variable. Here the ordered probit captures the differences between the likelihood of different levels of female involvement in the decision.

The analysis assumes a latent continuous variable E^* (women empowerment) that is a linear function of observed explanatory variables. Although we cannot observe E^*, it is related to an observed discrete variable E coded as 0, 1, 2, whose realisations are determined by the relative position of E^*. The ordered probit uses the following form which is built around the following linear relationship:

$$E^* = \beta' x + \epsilon \tag{1}$$

where E^* is the latent variable; β' is the vector parameters to be estimated and x is the vector of explanatory variables which include woman's borrowing and her personal characteristics; ϵ is the error term, which is assumed to be normally distributed. The observed data on women's role in household's financial decision, E are related to the underlying latent variable E^* through thresholds μ_1 and μ_2. A women falls in no role if $E^* < \mu_1$, in joint role if $\mu_1 < E^* < \mu_2$ and independent role above $\mu_2 < E^*$.We have the following probabilities for a woman to fall in each category:

$$\text{Prob}\ (E = 0) = \Phi(\mu_1 - \beta' x)$$

$$\text{Prob}\ (E = 1) = \Phi(\mu_2 - \beta' x) - \Phi(\mu_1 - \beta' x)$$

$$\text{Prob}\ (\text{E} = 2) = 1 - \Phi(\mu_2 - \beta' x) \quad (2)$$

where $\mu_1 < \mu_2$ are defined as the two thresholds between which the probability of the three categorical responses are estimated. A likelihood function can be derived making the estimation of this model relatively simple. Ordered probit estimation will give the thresholds μ and parameters β. The thresholds μ show the cut in the latent variable that make the dependent variable E shift from no role (0) to joint role (1) and from joint role (1) to independent role (2). The remaining parameters, β, represent the effect of changes in explanatory variables on the latent variable. The marginal effects of factors x on the propensity for women to fall in each level of decision can be derived in this way:

$$\partial \text{Prob}(\text{E} = 0)/\partial \text{x} = -\left[\Phi\left(\mu_1 - \beta' x\right)\right]\beta$$

$$\partial \text{Prob}(\text{E} = 1)/\partial \text{x} = -\left[\Phi\left(\mu_2 - \beta' x\right) - \Phi\left(\mu_1 - \beta' x\right)\right]\beta$$

$$\partial \text{Prob}(\text{E} = 2)/\partial \text{x} = \left[\Phi\left(\mu_2 - \beta' x\right)\right]\beta \quad (3)$$

with Φ the probability density and Φ the cumulative density function of the normal distribution. Computation of marginal effects is particularly meaningful for the ordered probit model whereas the effect of variables x on the intermediate categories is ambiguous with only the parameter estimates.

The estimated coefficients for each of the decision types are presented in Table 5. All results show a positive effect of woman's borrowing on her role in household financial decisions – irrespective of the decision type. The effect is strong and significant in two of the four regressions, Health and Education, but not in regressions Routine and Ceremonies.

With respect to other explanatory variables, the noteworthy results are for the variables Age, Children, Dalit and Women's Income. The coefficient for Age is negative and significant in the regression Routine and positive and significant in the regression Education – suggesting that older women are less likely to have a role in routine decisions but more likely to be involved in strategic decisions concerning children's education. This corresponds well with our qualitative findings which suggest that older women delegate routine decisions to younger women in the family. The coefficient for Children is positive and significant in the regressions Health, Education and Ceremonies – suggesting that if a woman has children then she is more likely to have a role in these decisions. Dalit has a negative and significant coefficient in the regressions Routine and Health – suggesting that being a Dalit is likely to negatively influence woman's role in these decisions. Finally, the results for woman's income show that having an independent income positively influences her ability to make routine decisions and decisions related to children's education.

Taken together, these results imply that, after controlling for personal and household characteristics and other sources of financial support received by the household, woman's role in financial decisions is positively influenced by her borrowing. This influence, moreover, is significant for decisions on health and education. These decisions mostly affect children; suggesting that woman's borrowing may enable her to influence health and educational outcomes for her children.

A key issue for this paper is whether loans taken instantly for consumption purposes affect women's power in different ways than planned loans that are more deliberately incurred. In the first round of estimations we did not differentiate between the different types of borrowing that women access. We do this next. Table 6 presents estimated coefficients on all four decision types, while separately considering the impact of planned and instant loans.

In a surprising turn of events, we find that women's planned loans do not impact their role in household financial decisions. The coefficient of women's planned borrowing is even negative in the regression for routine decisions. Women's instant borrowing, on the other hand, is seen to have a positive effect on their role in household decisions. The effect is strong and significant in three of the four regressions, the exception being Ceremonies. The results on the remaining explanatory variables remain much as before. Our results remain robust to an increase in women's age and income by 5%. A 10% change in income alters the significance of some of the material variables, but not the sign.

Given that all the surveyed women are members of SHGs and these loans make up a large proportion of women's planned borrowings, it can be argued that there may not be enough variation in the data to capture the impact of planned borrowings. Two points are worth considering here. First, over 30% of planned loans come from various other sources (see Table 2). Second, even within the SHG loans there is a fair amount of variation in the amount of money women receive (Mean: 14108.28; SD: 26730.47). This is mainly down to the autonomy that groups have over loan disbursement among members. Groups may choose to distribute loans equally among all members or rotationally. Whilst these decisions are taken by the group collectively, they are not directly in the control of any individual woman (hence selection problem is less of a worry).

For planned and instant loans we calculate the marginal effects (the change in the probability of an outcome from a unit change in the explanatory variable). All other covariates are set at the means of the relevant sample for the calculations. Table 7 shows the marginal effects from ordered probit models for women's role in household's financial decisions. As before, we consider three different probabilities: she has no role; she has a joint role and she is able to take these decisions alone. Given the structure of the ordered probit, these effects will sometimes be inversely related: any variable that has a positive effect on women's role in a household decision will increase the probability of women making decisions alone, but may reduce the probability of women having a joint role in a decision. The absolute values of the marginal effect can differ from probability to probability – because these also depend on the threshold parameters estimated by the ordered probit model. Although the magnitudes of the marginal effect are minute, once again, we find that instant loans are likely to significantly increase women's power to make decisions alone and reduce the likelihood of having no role or a joint role in decisions. This impact is consistent across three of the four decision types.

These results suggest that while instant loans seem to help women have a greater role in household financial decisions – planned loans do not seem to have a similar impact. Specifically, we find that instant loans help women have a say in routine decisions and decisions related to health and education expenditures. This seemingly paradoxical result is even more surprising when we consider that instant loans constitute just 30% of women's borrowing and are largely made up of small loans, accessed for short periods of time; whereas planned loans are large loans meant for investments and asset expansion. What this suggests, is that small and short term loans that can be accessed quickly matter more for women's bargaining power than large and long term loans. These unexpected results call for an in depth study of the context and practices surrounding the use of instant loans. Below we present findings from interviews with women borrowers and their family members that help explore the causalities underpinning these results.

<Table 4 Here>

<Table 5 Here>

<Table 6 Here>

<Table 7 Here>

6. Addressing Causality

Our results linking instant loans and women's empowerment are in themselves interesting as they bring to light a previously undetected association. However, moving beyond correlations and theorising about causal relationships with cross-sectional data only is far more ambitious. To provide insights into the complex issue of causality, we exploit qualitative data analysis.

We hypothesize that the causality is in the direction of instant credit influencing women's ability to participate in household's financial decisions. The possibility of reverse causality - where more empowered women could have procured instant loans – is unlikely. Indeed, instant loans are debasing and can hardly be the consequence of pre-existing empowerment. Woman of pre-existing status and power would not willingly seek instant loans. This claim is corroborated by our data which suggests that instant loans are more prevalent among women from poorer, Dalit households (see Table 4). Poorer women from the lowest social stratum are least likely to exert an influence over household decisions.[15]

To further document causality, we take advantage of our qualitative surveys and discuss the observations under three broad points: instant loans as women's obligation, their socially debasing nature and their suitability to meet household's reproductive needs. In essence, we contend that women seek socially debasing instant loans out of compulsion to meet their household obligations, but they are later rewarded for this by means of greater role in decision-making.

6.1. Instant loans are women's obligation

There are several reasons why the practice of instant borrowing is embedded in the lives of poor rural women in the survey area. Uncertain incomes, increased female responsibility for family provisioning, male inability to provide for the household coupled with reluctance to engage in instant borrowing leaves women with little choice but to seek out sources of instant borrowing. Since the day-to-day running of the household is generally considered a woman's "*headache*"– they have little choice but to use multiple financial tools to adjust income and expenses, both to make ends meet on a daily basis, but also to cope with unexpected and incidental expenses.

In a male focus group, we asked about why women were the only ones who procured these loans. Some men used the English word *"adjustment"* to describe the ability that wives possess that enabled them in the daily running of the household – something they readily acknowledge men simply cannot do. Ramesh (age 34) describes how his wife goes about '*adjusting'* finances to meet family needs. *"The moment I think about it, she gets the money"*, explains Ramesh. *"My mother gets sick, she will pledge her jewels, my bike needs to be repaired, and she will get help from friends, children need to go to school, she will arrange for the bus pass".* Praising her for borrowing small amounts of money without involving other members of the family, he further claims that wives must *"...borrow quickly, without disturbing the other household members – especially their husbands"*.

Women also recognise that they are mainly responsible for *"adjustments"* required to run a household and associate this with a "*burden*". Parvati (age, 42), who borrows from multiple sources, complaints about the injustice of gender responsibilities *"Women shoulder all the responsibilities, they have to deal with family problems in any situation, Men find no solution. They just consume alcohol and sleep."* The reason why women are prepared to put up with the task of getting small loans is because it enables them to have a say in the financial decision at stake. Without these loans, they realise that the opportunity to make a particular decision may be denied to them – simply down to financial constraints. Parvati (age 42) has no regular income but she manages household budget and participates in most financial decisions. She explains, *"giving 100 rupees to my husband for his petrol gives me more respect than finding 10,000 rupees for a big expense. You know, men do not want to be disturbed by small expenses."* She explains that she uses this as an opportunity to bargain: *"It is a give and take policy. I solve a problem, and then I can ask for something"*. She also explains how she convinced her husband to educate their handicapped daughter (also see Section 4).

Our evidence suggests that women are compelled to incur instant borrowing to meet the reproductive needs of their households. These loans may in turn enable women to manoeuvre a bargaining space for herself that she uses to further her say in routine matters, also in matters of health and education of her children. Instant loans do not seem to influence women's say in matters of ceremonial expenses. We find that this is because ceremonial expenses are very different in nature from the typical health and education expenses. The latter are typically unexpected and incidental, and hence are more likely to be provisioned either from family savings or from instant borrowing. Ceremonial expenses, on the other hand, are known beforehand and typically also involve far larger amounts. These expenses are much more likely to be planned and arranged by the family, sometimes well in advance. This explains why instant loans do not help women have a greater say in such decisions.

6.2. Instant loans are socially debasing

The interviews with our respondents unequivocally established the fact that taking instant loans was considered socially debasing. Borrowing from the crudely behaved ambulant lender was degrading indeed, but it was also not honourable to borrow from the seemingly well behaved shopkeepers. Such borrowing is almost like *"begging"*, says Parvati (age 42). The repayment burden on women is also crushing. The family takes little responsibility in repaying these loans – as they are either *"too small"* for them to be concerned or they are *"her loans"*, explains Ramesh (age 34).

Some ambulant lenders can use extremely nasty coercive measures – not only using severely abusive language but also show no hesitation in physical abuse, in some cases even beating women. Our evidence suggests that women also experience varying degrees of sexual abuse, ranging from vulgar language to crudely being touched in their private parts. In the absence of physical collateral, ambulant lenders see this as their only enforcement mechanism. Recollecting some of these experiences, Parvati (age 42) tells us how on the day of mobile lender repayments, she has stomach cramps. *"It's like husbands, their mood is unpredictable"*. Giving a similar account of lender's behaviour Rajam (age 48) tries to take a more balanced view, *"…(borrowing) is like a family member, who gives both happiness and sorrow, just like your husband, he may love you, but he may also beat you"*. She further acknowledges that everyone in her household relies on her for small amounts of cash on a frequent basis and that she can never do without these loans.

So it seems that instant loans are a boon and a bane for these women – they must take them to meet the reproductive needs of their family, but equally taking these loans means they must endure a level of social degradation. Women, it seems, perform a convenient role for their husbands and households by taking on the burden for these loans. Women's greater role in decisions here may not indicate greater empowerment but a mere concession by her family in return for women's role in securing an instant loan and saving other family members the humiliation of incurring it.[16] Even this concession, it seems, extends to only small, incidental expenses. Large, strategic expenses like ceremonies still remain well within the patriarchal domain of the household.

6.3. Instant loans are designed to meet household's reproductive needs

By design, instant loans are more effective in helping women meet household's reproductive needs and by extension, are more suited to help women have a greater role in household decisions. The main characteristics that set apart instant loans from planned loans are: ease of access, small size and short term. Instant loans are accessed within the community, mostly from people known to the women and their households. Shopkeepers extend credit only because women regularly buy from their shops, neighbours give small amounts of money to women because they know they can rely on them in turn and ambulant lender may not be respectful, but they would lend without any conditions. Moreover, women can get these loans at very short notices – and this is the key to them having a role in household's decisions. A situation related to us by one of our survey respondents (Ramesh, age 34) is useful to make this point clearly. At the start of the school term, his household was faced with the problem of paying for the children's school bus pass. His wife immediately got a small loan and solved the problem and they managed to send their children to school. It is very likely that, next time, when a decision involving children's education comes up, Ramesh will involve his wife. This ability to be involved in decisions is down to the woman securing instant loans. Planned loans cannot influence this ability due to their rigid and nepotistic nature.

Women, in general, find it difficult to access loans from formal lenders. Apart from SHG loans, which deliberately target women without any specific conditions, planned loans are not easily available to women. Those that are available, impose several conditions – which most women cannot fulfil. Because most planned loans are for large amounts of money and are associated with some prestige – they need the applicant to have some social status, either in term of asset ownership or in terms of knowing important people in the community. Planned loans typically require some collateral and some form of introduction: someone introduces you to the bank manager and implicitly becomes a guarantor to your loan. Women generally lack such pre-existing economic and social "power" and this may at least partly explain why they are excluded from most planned loans – especially very large amounts. Further, large planned loans require spatial mobility – as many big lenders live outside the village. Several women (and their families) are reluctant to (let them) travel outside their village to get loans – as this may tarnish their reputations. Women being humiliated by informal lenders within the community, it seems, is much more acceptable to families than unknown dangers that women may face if they leave their village to borrow.

7. Concluding Comments

Research so far has ignored the impact of borrowing from informal networks on women empowerment. We address this gap by drawing on household survey data from rural South India. Our results suggest that instant credit is a significant part of poor women's loan portfolio (around

30%) and they influence women’s intra-household bargaining power. Women who access instant loans are able to exert influence on routine financial decisions as well as decisions pertaining to health and education of their children. In contrast, planned loans do not exert such influence on women’s role in financial decisions. This unexpected result is even more surprising when we consider that instant loans are general very small and mainly incurred to meet the consumption needs of the household. On the other hand, women usually take larger planned loans for productive investment with the expectation to improve their livelihoods.

Exploring the true nature of instant loans enables us to understand why they might help women have a greater say in household’s financial decisions. Our findings suggest that there exists a social hierarchy of debt in rural South India. Borrowing instantly, whether it is from the vulgar ambulant lenders or friendly shopkeepers is not considered socially honourable. Indeed, we find that women experience severe verbal and physical humiliation at the hands of some informal lenders. We find that men rarely borrow from informal sources as their humiliation in a social sphere is more closely associated with family honour. We also find that women are structurally embedded to instant debt. Their increased responsibility for day-to-day family provisioning coupled with high income volatility means borrowing from informal sources is almost a daily necessity that women cannot escape. Household members are found to actively rely on women’s ability to borrow instantly. By accessing instant loans and by bearing the brunt of the social humiliation associated with such loans, women perform a convenient service for their households. The greater role that these women have in household financial decisions can then be explained as a concession by their families in return.

Despite the negative associations, we find that instant loans are very important for women. They are instantly accessible with little paperwork, are small enough for individuals to manage and are typically short termed with flexible repayment conditions. It is for these reasons that women continue to rely on these loans. Herein lies a lesson for financial institutions that may enable them to design products that help women meet their responsibility towards routine household provisioning. By reducing the constant burden that women face of meeting their reproductive responsibilities, such loans are also likely to alleviate the constraints they face in making successful use of enterprise loans (Johnson, 2004). More instantly available loans or more flexible financial products are unlikely, however, to “empower” women in a fundamental sense. At most they are likely to help them better negotiate their position within a structural framework that remains largely unchanged. The danger is that it may even reinforce the gendered division of responsibilities. One of the main challenges of the financial industry is to ensure that products designed for women do not entrench them in subordinate positions by responding only to practical needs identified through market research. Changing the structural framework that entrenches women remains the real challenge and credit alone is unlikely to help. Within its limited scope, however, microloans can be useful by being accessible and by the design of loan contracts that are more effective in supporting women's empowerment.

Tables and Figures

Table 1. Summary Statistics (N=163, data from the year 2008)

Variable Name	Description	Mean (SD)	Minimum	Maximum
Women's personal characteristics				
Age	Women's age in years	35.38 (9.09)	18	55
Education	Women's level of education. 0 = never been to school; 1 = primary; 2 = secondary.	0.90 (0.74)	0	2
Children	Number of children below the age of 15	1.75 (0.79)	0	4
Household characteristics				
Size	Number of members in the family	4.79 (1.46)	2	11
Dalit	Dummy variable. 0 = non-Dalit; 1 = Dalit	0.60 (0.49)	0	1
Joint	Dummy variable. 0 = Nuclear family; 1 = Joint family	0.33 (0.47)	0	1
External ties	The external social ties enjoyed by the household	8.69 (7.55)	0	41
Land	Farm land owned by the household in acres[1]	0.46 (0.83)	0	6
Housing	Type of materials used to construct the house – ranging from 0 = all temporary to 4 = all permanent[2]	2.09 (1.35)	0	4
Remote	Dummy variable. 0 = Rural but not remote; 1 = Rural and remote.[3]	0.25 (0.43)	0	1
Household finances in 2008				
Woman's income	Woman's annual cash income	4564.42 (6460.37)	0	30,000
Other's income	Annual cash income earned by members of the household other than respondent	40219.94 (24909.82)	0	160,800
Support-wife	Net annual support given by wife's maternal relations	8261.66 (10788.48)	0	106,000
Support-husband	Net annual support given by husband's siblings and other relatives	8589.72 (11762.29)	0	100,000
Woman's debt	Debt incurred by woman alone	28555.92 (38539.62)	0	240,000
Other's debt	Debt incurred by members of the household other than respondent	47966.56 (83765.96)	0	780,000

Notes: [1] Land typically belongs to the male head of the household.
[2] In rural India, it is common to own the house one lives in. In our sample, ownership of house is 100%, but

like agricultural land, house is also usually in the name of the male head of family.
[3] A household was classified as Remote if it took over 30 minutes to reach it by bus.

Table 2. Loan Types

Type of loan	Who gives?	Typical amount	Typical duration	Interest charged pm[1]	Other conditions	Who takes and for what?	Total borrowed (% of debt)	Mean (SD)
Planned loans							3233700 (69.47)[2]	19838.65 (34089.05)
Local Elite	Wealthy persons, locally influential	Large (>10000)	Very long (sometimes several years)	High (5-10%)	Repayment schedules are inflexible	Mainly men, but also women, for productive and social investments	179250 (3.85)	1099.693 (5087.02)
Institutional	National banks and subsidiaries and private institutions	Large (>10000)	Long (usually 1 to 2 years)	Medium (2-3%)	Repayments are fixed but in practice can be negotiated	Only men, for agricultural investment. Collateral is necessary.	476500 (10.24)	2923.313 (15839.33)
Relatives and Friends	Relations and friends who may also be neighbours	Medium to Large (>5000)	Very long (several years)	Low (1-2%)	Fairly flexible	Men and women, mainly for social and religious needs	278300 (5.98)	1707.362 (6019.519)
SHG loans	Rural banks	Medium to Large (between 2500 and 10000)	Long	Low (1-2%)	Rigorous, but instalments are small	Only women, for both consumption and productive purposes	2299650 (49.41)	14108.28 (26730.47)
Instant loans							1420915 (30.53)	8717.27 (22149.81)
Kaimathu	Neighbours and friends	Small (100 to 1000 rupees)	Short (few days)	None	Reciprocity is expected	Mainly women, for consumption	432790 (9.30)	2655.153 (16742.41)
Thandal	Door-to-door money lenders	Medium (a few 000)	Medium (3 months)	High (10-15%)		Mainly women, for consumption (men may be present)	281000 (6.04)	1723.926 (6082.80)
Shops	Shopkeepers	Varies but typically <1000	Varies but typically a few weeks	Varies, (0-10%)	Groceries on interest free credit	Only women, for consumption	270125 (5.80)	1657.209 (3577.30)
Pawnbroker	Pawnbroker	Jewellery, occasionally land is pawned (1000-10,000)	Long (1 to 2 years)	Medium (2-3%)	A piece of paper gives details of exchange	Mainly women, but also men if loan amount is big, for consumption and	437000 (9.39)	2680.982 (8355.68)

social investment

Notes: [1] CPI based average inflation rate in 2008 for rural India was 8.32%
[2] As percentage of total debt incurred by the woman.

Table 3. Types of Household Financial Decisions and Examples

Decision Type	Some Typical Decisions
Routine	To buy rice for family; To buy cooking oil; To buy ribbons for hair
Health	To take a family member to the doctor; To take a child for immunisation; To buy medicines for non-routine illnesses
Education	To buy school shoes; To buy stationery; To buy school bus pass
Ceremonies	To organise child's naming ceremony; To organise a communal meal to mark the death anniversary of a family elder; To organise a wedding

Figure 1. Women's Role in Household Financial Decisions (N=163)

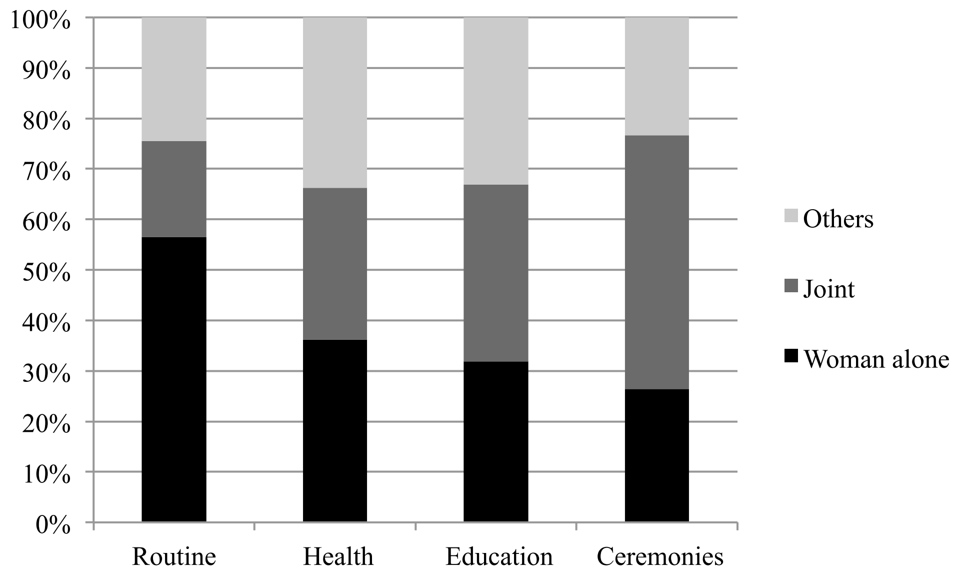

Table 4. Summary Statistics across Loan Type (N=163, data from the year 2008)

Variable Name	All Loan Types			Planned Loans *vs*. Instant Loans		
	≤ Median borrowing N=83	>Median borrowing N=80	*p*- value[1]	More Planned N=97	More Instant N=49	*p*- value
Women's personal characteristics						
Age	34.07	36.70	0.03	35.47	34.96	0.37
Education	0.88	0.93	0.34	0.92	0.92	0.50
Children	1.78	1.72	0.30	1.78	1.71	0.31
Household characteristics						
Family Size	4.84	4.73	0.31	5.01	4.39	0.01
Dalit	0.57	0.62	0.28	0.52	0.78	0.00
Joint family	0.30	0.36	0.24	0.38	0.22	0.03
External ties	8.11	9.32	0.12	7.34	10.69	0.00
Land	0.45	0.48	0.41	0.58	0.25	0.01
Housing	2.18	2.00	0.19	2.18	1.82	0.06
Remote	0.34	0.15	0.00	0.28	0.12	0.02
Household finances in 2008						
Woman's income	4034.76	5075.93	0.14	4815.46	4810.20	0.50
Other's income	39733.54	40712.35	0.40	43230.41	34922.45	0.03
Support-wife	7685.37	8845.06	0.25	7491.49	9576.53	0.14
Support-husband	6793.90	10407.72	0.02	8800.52	9612.24	0.35
Woman's debt	6952.93	50425.62	0.00	32580.67	29087.55	0.31
Other's debt	49700.00	46211.73	0.40	54911.86	21102.04	0.01

Note: [1] The probability or the *p*-value associated with the *t*-test is reported here. If this *p-value* is below 5% (0.05) then we can conclude that there is a statistically significant difference between the two population means.

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Table 5. Regressing Women's Role in Financial Decisions on Borrowings and Personal Characteristics: Raw Coefficients from Ordered Probit Model

	Type of Financial Decision			
	Routine	**Health**	**Education**	**Ceremonies**
Women's personal characteristics				
Age	-0.0197	0.0059	0.0131	0.0045
	(-1.91)*	(0.55)	(1.72)*	(0.43)
Education	-0.0456	0.0275	-0.0148	-0.0875
	(-0.31)	(0.21)	(-0.11)	(-0.68)
Number of children	0.1259	0.2824	0.1972	0.2903
	(0.83)	(2.08)*	(1.79)*	(2.29)**
Household characteristics				
Household size (log)	-0.2178	-0.0964	-0.0257	-0.1083
	(-2.10)**	(-0.98)	(-0.27)	(-1.15)
Dalit by caste (d)	-0.3460	-0.5818	-0.2986	-0.2516
	(-1.76)*	(-2.93)***	(-1.47)	(-1.25)
Joint family (d)	0.0961	0.1218	0.0435	0.0311
	(0.33)	(0.45)	(0.16)	(0.12)
External ties	0.0359	0.0032	-0.0083	0.0070
	(2.66)***	(0.25)	(-1.67)	(0.57)
Housing material	-0.0487	-0.0607	-0.0860	-0.0643
	(-0.65)	(-0.86)	(-1.21)	(-0.93)
Remote location (d)	-0.4590	-0.1046	-0.2168	-0.3936
	(-1.97)*	(-0.46)	(-0.95)	(-1.77)*
Household finances				
Woman's income (log)	0.00002	0.0004	0.0004	0.0009
	(1.71)*	(0.99)	(2.87)***	(1.29)
Other's income (log)	0.0003	0.0005	0.0008	-0.0000
	(0.427)	(1.46)	(0.20)	(-0.05)
Support-wife	0.0009	-0.0002	0.0001	0.0006
	(1.90)*	(-0.29)	(0.92)	(0.61)
Support-husband	0.0009	0.0006	0.0005	0.0007
	(1.58)	(0.67)	(0.56)	(1.66)
Woman's borrowing	0.0001	0.0002	0.0005	0.0002
	(0.65)	(1.92)*	(2.23)**	(0.97)
Other's borrowing	-0.0001	-0.0000	-0.0001	-0.0000
	(-1.04)	(-0.66)	(-0.90)	(-0.37)
Observations	163	163	163	163
Log likelihood =	-173.0521	-198.1367	-195.2506	-188.2965
Chi^2	37.43	23.93	30.41	24.35

Note: Estimated by ordered probit. *Z*-statistics in parentheses. (d) indicates a dummy variable. * Significant at 10%; ** Significant at 5%, *** Significant at 1%.

Table 6. Regressing Women's Role in Financial Decisions on Types of Borrowings and Personal Characteristics: Raw Coefficients from Ordered Probit Model

	Type of Financial Decision			
	Routine	**Health**	**Education**	**Ceremonies**
Women's personal characteristics				
Age in years	-0.0241	0.0057	0.0077	0.0045
	(-2.15)*	(0.53)	(1.70)*	(0.42)
Education	-0.0635	0.0199	-0.0631	-0.0925
	(-0.43)	(0.15)	(-0.47)	(-0.72)
Number of children	0.1218	0.2834	0.1889	0.2895
	(0.79)	(2.08)*	(1.73)*	(2.18)*
Household characteristics				
Household size (log)	-0.2116	-0.0943	-0.0034	-0.1074
	(-2.00)*	(-0.95)	(-0.04)	(-1.14)
Dalit by caste (d)	-0.4258	-0.5979	-0.4456	-0.2567
	(-1.97)*	(-2.99)***	(-2.14)*	(-1.27)
Joint family (d)	0.1069	0.1458	0.0609	0.0433
	(0.37)	(0.53)	(0.22)	(0.16)
External ties	0.0249	0.0006	-0.0250	0.0057
	(1.99)*	(0.05)	(-1.86)*	(0.46)
Housing material	-0.0339	-0.0641	-0.0710	-0.0661
	(-0.44)	(-0.91)	(-0.97)	(-0.95)
Remote location (d)	-0.3847	-0.0869	-0.1327	-0.3852
	(-1.64)	(-0.38)	(-0.57)	(-1.68)
Household finances				
Woman's income (log)	0.0006	0.0002	0.0009	0.0007
	(1.34)	(0.82)	(2.62)**	(1.18)
Other's income (log)	0.0003	0.0006	0.0001	0.0000
	(0.70)	(1.57)	(0.25)	(0.01)
Support-wife	0.0006	-0.0005	0.0002	0.0004
	(2.13)**	(-0.52)	(0.89)	(0.48)
Support-husband	0.0006	0.0005	0.0002	0.0005
	(1.34)	(0.59)	(0.29)	(1.63)
Woman's planned loans	-0.0000	0.0000	0.0003	0.0001
	(-0.19)	(0.26)	(0.98)	(0.46)
Woman's instant loans	0.0005	0.0007	0.0004	0.0004
	(2.84)***	(2.44)**	(4.10)***	(0.93)
Other's borrowing	-0.0000	-0.0000	0.0000	-0.0000
	(-0.32)	(-0.45)	(0.04)	(-0.28)
Observations	163	163	163	163
Log likelihood	-168.3541	-197.4284	-186.8630	-188.1066
Chi^2	43.83	42.35	44.19	41.73

Note: Estimated by ordered probit. *Z*-statistics in parentheses. (d) indicates a dummy variable. * Significant at

10%; **Significant at 5%; *** Significant at 1%.

Table 7. Effects of Planned loans and Instant loans on Women's Role in Financial Decisions: Marginal Effects from Ordered Probit Models (N=163)

	Planned Loans			Instant Loans		
	No role	**Joint**	**Alone**	**No role**	**Joint**	**Alone**
Routine	0.0000	0.0000	-0.0000	-0.0008	-0.0004	0.0008
	(0.19)	(0.19)	(-0.19)	(-2.94)***	(-2.16)**	(2.92)***
Health	-0.0000	-0.0000	0.0000	-0.0002	-0.0000	0.0002
	(-0.26)	(-0.23)	(0.26)	(-1.35)	(-0.43)	(2.34)**
Education	-0.0000	-0.0000	0.0001	-0.0004	-0.0001	0.0005
	(-0.98)	(-0.63)	(0.98)	(-4.26)***	(-0.78)	(3.86)***
Ceremonies	-0.0000	-0.0000	0.0000	-0.0001	-0.0000	0.0001
	(-0.46)	(-0.37)	(0.46)	(-0.93)	(-0.52)	(0.93)

Note: *Z*-statistics in parentheses. * Significant at 10%; **Significant at 5%; *** Significant at 1%.

Appendix. Data Collection

The data collected in 2008 were from the clients of two NGOs operating in two adjoining districts, Vellore and Thiruvallur, in the North of Chennai (Tamil Nadu, India). Names of NGOs have been withheld for confidentiality reasons. The first NGO (we shall call it NGO A) has been operating since 1990 in the Vellore district, which is traditionally agricultural, but where there is an increasing amount of textile and electronic industry. In 2008, NGO A dealt with 585 groups, involving 8875 women, in 115 villages. Its target population is exclusively women from low and middle castes. The second NGO (we shall call it NGO B) has been operating since the 1980s in the more urbanized Thiruvallur district, closer to the main city of Chennai. In 2008, NGO B dealt with 126 groups (about 2142 women). Its target population is exclusively women from low castes. The two NGOs currently apply SHG methodology and thus act as an intermediary between these groups and external lenders, namely banks, governmental schemes and governmental agencies such as the Tamil Nadu Women Development Corporation.
The following steps were applied for sample stratification:

1. Classification of all villages attended by the NGOs (based on lists provided by the two NGOs) according to three enclosure levels: enclosed rural, intermediate and peri-urban.

2. For each enclosure level, frequented villages were drawn at random. The weight applied to each enclosure level was the same as that observed in the general population (both NGOs' policy is to have a homogenous coverage in a given specific and bounded geographic area).

3. For each village selected, groups were randomly drawn out (based on the exhaustive list of groups provided by the two NGOs).

4. For each group drawn, members were randomly drawn to be interviewed (based on a list provided by the SHG leaders). In Vellore, both middle and low castes are attended by the NGO. Thus women were drawn within each category in order to follow the weight of each caste level in the attended population.

Notes

[1] At the same time, borrowing from the local elite is often a source of exploitation and dependency. For more on this see Swaminathan, 1991; Harriss-White & Colatei 2004 and Guérin *et al.* 2013.

[2] The design of flexible microfinance products is discussed by Laureti and Hamp (2011) and Labie *et al.* (2013).

[3] The full sample has a total of 170 households. One man and one woman were interviewed from each household. For this study, however, we use only the information collected from the women respondents. Furthermore, as we are interested in studying the relationship between credit and women's bargaining power in the household, we excluded female-headed households from our analysis.

[4] Dalits are former untouchables, classified as Scheduled Caste and belonging to the lowest echelon of social hierarchy in rural India.

[5] Attempts at including the household's non-cash income (self-production and payment in kind) were abandoned given the paucity of data.

[6] In 2008, the official Indian poverty threshold was around 20,000 INR for a five-member family. In fact, this amount is underestimated since decent living standards correspond to 50,000 INR.

[7] In India, it is quite common to find cash-strapped rural households supported by relatives who have migrated to the cities and have better access to cash incomes. This support may be purely altruistic, but is often in exchange for caring for farmlands and homesteads left behind and may be reciprocated in the form of agricultural produce.

[8] Preceding this categorisation was a process of much trial and error. We began by examining each type of loan separately, but it was quickly apparent that this would not give us meaningful results because of missing data and it was also difficult to differentiate between loan types using the objective indicators of accessibility and formality. We then started merging different types of loans along these indicators and we estimated the results at each step. Loan from pawnbrokers was the only loan type that we were unsure of how to categorise because although these loans were available instantly, they did require some planning and also involved 'paperwork' (usually just a piece of paper stating the item pawned and the amount of credit). We decided to keep these loans under 'instant loans' because accessibility mattered more than formality to the survey households. Our results are robust to how we categorised this loan type.

[9] For certain types of instant loans – like pawnbroker loans, male participation may be required depending on the value of item being pawned and the distance to the pawnshop. Occasionally men are also seen to borrow from their close circle of friends and acquaintances, but this is often at their place of work or outside the village, which has limited implications for their status and honour within their community.

[10] This observation ties in with our regression results (reported in Table 4). We find that woman's age has a negative and significant influence on women's role in routine financial decisions, indicating that as women get older they tend to

delegate these decisions to other in the household. Our qualitative interviews suggest that the people who pick up these decisions are usually younger women in the household.

[11] We also compare women who borrow more (median or above) planned loans with women who borrow less of such loans (below median) and women who borrow more of instant loans with women who borrow less of such loans. These results are compatible with the results reported in Table 4 and are available upon request from the authors.

[12] There is a general point about the possibility of omitted variables that must be made here. There may be other variables that can influence women's decision making power that we may not be aware of. Consequently, the results could be biased. This is problem that studies examining the determinants of decision-making power suffer from. This issue is difficult to address with a cross-sectional analysis without valid instrument(s).

[13] The decision making power for a woman can be expected to be correlated across the four decision types. Pooling all decision categories or using system regression should help address this issue. Our qualitative fieldwork, however, indicates that the importance attached to decisions differs vastly depending on the type of decision. We also find that decision making across the decision types are only moderately correlated with coefficients between 0.50 and 0.60.

[14] Note that our results are robust to this assignment. If we consider decision making as a binary variable by pooling joint and individual decisions then this does not alter the results in any material way. Robustness tests are available from the authors upon request.

[15] These summations are also supported by the results reported in Tables 5 and 6, where the coefficient for the variable Dalit and Housing Material (proxy for household wealth) is negative in all the regressions.

[16] Women may perform 'other convenient services' for the household like housework, work in the field and raise children. It is likely that women performing these services may also enjoy a greater say in household decisions. We cannot test this idea with our existing field data. While we appreciate this point made by the referee, our understanding of rural society in India suggests that these 'other services' are considered to be part of a woman's traditional role and are routinely expected from a wife and a mother. On the other hand, accessing credit at very short notice is not traditionally a woman's task and may hence not be viewed similarly to other household tasks and be more deserving of recognition.

References

Agier, I., I. Guérin, A. Szafarz. (2012). Child Gender and Parental Borrowing: Evidence from India. *Economics Letters* 115, 363-365.

Agier, I., A. Szafarz. (2013). Microfinance and Gender: Is There a Glass Ceiling on Loan Size? *World Development* 42, 165-181.

Ardener, S., S. Burman. (1996). Money-go-rounds: the Importance of Rotating Savings and Credit Associations for Women. Cross Cultural Perspectives on Women Series, Berg.

Armendáriz, B., J. Morduch. (2010). *The Economics of Microfinance*. 2nd Ed., Cambridge, MA: The MIT Press.

Banerjee, A., E. Duflo, R. Glennerster, C. Kinnan. (2010). The Miracle of Microfinance? Evidence from a Randomized Evaluation. Boston: J-PAL and Centre for Microfinance.

Bouman, F.J.A. 1977. Indigenous Savings and Credit Associations in the Third World: A Message? *Savings and Development* 1: 181-220.

Bouman, F.J.A. (1994). ROSCA and ASCRA: Beyond the Financial Landscape. In Bouman F.J.A. and O. Hospes (Eds.) *Financial Landscapes Reconstructed: The Fine Art of Mapping Development* (pp. 375-394). Boulder, CO: Westview Press.

Collins, D., J. Morduch, S. Rutherford, O. Ruthven. (2009). *Portfolios of the Poor: How the World's Poor Live on $2 a Day*. Princeton, NJ: Princeton University Press.

da Corta, L. & Venkateshwarlu, D. (1999). Unfree relations and feminization of agricultural labour in AP, 1970–1995. *The Journal of Peasant Studies*, 26(2), 71–139.

D'Espallier B., I. Guérin, R. Mersland. (2013). Focus on women in microfinance institutions. *Journal of Development Studies*, 49(5), 589-608.

D'Espallier B., I. Guérin, R. Mersland. (2011). Women and Repayment in Microfinance: A Global Analysis. *World Development* 39, 758–772.

Duflo, E. (2003). Grandmothers and Granddaughters: Old-Age Pensions and Intrahousehold Allocation in South Africa. *World Bank Economic Review* 17, 1-25.

Dwyer, D.H., J. Bruce. (1988). *A Home Divided: Women and Income in the Third World*. Stanford, CA: Stanford University Press.

Garikipati, S. (2008a). The Impact of Lending to Women on Household Vulnerability and Women's Empowerment: Evidence from India. *World Development* 36, 2620-2642.

Garikipati, S. (2008b). Redefining Gender Roles, Reworking Gender Relations: Female Agricultural Labour in Dry Regions of Andhra Pradesh, in S. Horrell, H. Johnson, and P. Mosley (Eds.) *Work, Female Empowerment and Economic Development* (pp. 140-200). London: Routledge.

Garikipati, S. (2009). Landless but not Assetless: Female Agricultural Labour on the Road to Better Status: Evidence from India. *Journal of Peasant Studies* 36, 517-545.

Guérin, I. (2006). Women and Money: Multiple, Complex and Evolving Practices. *Development and Change* 37, 549-570.

Guérin I. (2011). The Gender of Finance and Lessons for Microfinance *In* Armendariz B. and M. Labie M. (Eds.) *Handbook of Microfinance* (pp. 563-589). London-Singapore: World Scientific Publishing.

Guérin I., B. D'Espallier G. Venkatasubramanian. (2013). Debt in Rural South India: Fragmentation, Social Regulation and Discrimination, *Journal of Development Studies*, 49(9), 1155-1171.

Guérin I., M. Roesch, G. Venkatasubramanian, B. D'Espallier. (2012). Credit from Whom and for What? Diversity of Borrowing Sources and Uses in Rural South-India. *Journal of International Development,* 24, S122-S137.

Harris-White, B., D. Colatei. (2004). Rural Credit and the Collateral Question. In Harriss-White and Janakarajan (Eds.) *Rural India Facing the 21st Century. Essays on Long Term Change and Recent Development Policy* (pp. 252-283). London: Anthem South Asian Studies.
Hashemi, S.M., S.R. Schuler, A. P. Riley. (1996). Rural Credit Programs and Women's Empowerment in Bangladesh. *World Development* 24, 635-653.
Holvoet, N. (2005). The Impact of Microfinance on Decision-Making Agency: Evidence from South India. *Development and Change* 36, 75-102.
inflation.eu: Worldwide Inflation Data (http://www.inflation.eu/inflation-rates/india/historic-inflation/cpi-inflation-india-2008.aspx, accessed on 9th December, 2013)
Johnson, S. (2004). Gender Norms in Financial Markets: Evidence from Kenya. *World Development* 32, 1355-1374.
Kabeer, N. (1994). *Reversed Realities: Gender Hierarchies in Development Thought*. London: Verso Books.
Kabeer, N. (2001). Conflicts over Credit: Re-Evaluating the Empowerment Potential of Loans to Women in Rural Bangladesh. *World Development* 29, 63-84.
Kabeer, N. (2005). Is Microfinance a 'Magic Bullet' for Women's Empowerment: Analysis of Findings from South Asia. *Economic and Political Weekly* 40, 4709-4718.
Kalpana, K. (2008). The Vulnerability of "Self-Help": Women and. Microfinance in South India. *Institute of Development Studies Working Paper 303*, Brighton, UK.
Labie, M., C. Laureti A. Szafarz. (2013). Flexible Products in Microfinance: Overcoming the Demand-Supply Mismatch, *Working Papers CEB 13-044*, Université Libre de Bruxelles, Belgium.
Laureti, C., M. Hamp. (2011). Innovative Flexible Products in Microfinance. *Savings and Development* 35, 97-129.
Lemire, B. (2001). Women, Credit and the Creation of Opportunity: An Historical Overview. B. Lemire, R. Pearson and G. Campbell (Eds.) *Women and Credit. Researching the Past, Refiguring the Future* (pp. 3-15). Oxford/New York: Berg Editions.
Mencher, J.P. (1988). Women's Work and Poverty: Women's Contribution to Household Maintenance in South India. In Bruce et Dwyer (Eds.) *A Home Divided: Women and Income in the Third World* (pp. 99-119). Stanford, CA: Stanford University Press.
Morvant-Roux S., Guérin I., Roesch M. Moisseron J.-Y. (2014). Adding value to randomization with qualitative analysis: the case of microcredit in rural Morocco, *World Development*, 56, 302-312.
Pitt, M.M., S.R. Khandker. (1996). Household and Intrahousehold Impact of the Grameen Bank and Similar Targeted Credit Programs in Bangladesh. DP 320. Washington D.C: World Bank.
Rahman, R.I. (1986). Impact of Grameen Bank on the Situation of Poor Rural Women. Bangladesh Institute of Development Studies Grameen Bank Evaluation Project 1, Dhaka.
Rahman, R.I. (1989). Impact of Grameen Bank Intervention on Rural Power Structure. Bangladesh Institute of Development Studies Research Report 61, Dhaka.
Sa-Dhan. (2009). The Bharat Microfinance Report - Quick Data. Sa-Dhan, New-Delhi.
Salway, S., S. Jesmin, S. Rahman. (2005). Women's Employment in Urban Bangladesh: A Challenge to Gender Identity? *Development and Change* 36, 317-349.
Schultz, T.P. (2001). Women's Roles in the Agricultural Household: Bargaining and Human Capital Investments. In B.L. Gardner and G.C. Rausser (Eds.), *Handbook of Agricultural Economics* (pp. 383-456). Amsterdam: North-Holland.
Senauer, B. (1990). The Impact of the Value of Women's Time on Food and Nutrition. In I. Tinker (Ed.), *Persistent Inequalities: Women and World Development*, 150-161. Oxford: Oxford University Press. Press.
Shipton, P.M. (2007). *The Nature of Entrustment: Intimacy, Exchange, and the Sacred in Africa.* London: Yale University Press.
Swaminathan, M. (1991). Segmentation, Collateral Undervaluation and the Rate of Interest in Agrarian Credit Markets: Some Evidence from Two Villages in South India, *Cambridge Journal of Economics*, 15(2), 161–78.
Thomas, D. (1990). Intra-Household Resource Allocation: An Inferential Approach. *Journal of Human Resources* 25, 635-664.
Vijayabaskar, M., P. Swaminathan, S. Anandhi, G. Balagopal. (2004). Human Development in Tamil Nadu: Examining Linkages. *Economic and Political Weekly* 39, 797-802.